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Journal of Asia-Pacific Biodiversity

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Asia Pacific
Biodiversity

Original article

Five paederine species (Coleoptera: Staphylinidae: Paederinae) new to Korea

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ARTICLE INFO

Article history:

Received 13 March 2014

Received in revised form

31 March 2014

Accepted 7 April 2014

Available online 24 April 2014

Keywords:

Paederini

Paederinae

Staphylinidae

New record

Korea

ABSTRACT

Five Paederine species [*Astenus chloroticus* (Sharp, 1874), *A. setifer* Cameron, 1930, *Medon submaculatus* Sharp, 1889, *Thinocharis japonica* Bernhauer, 1909 and *Scopaeus curraxoides* Adachi, 1955] are reported for the first time from Korea. The genus *Thinocharis* Kraatz, 1859 is also first reported for the Korean fauna. The photographs of adult habitus and illustrations of male genitalia of them are provided here.

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Introduction

The subfamily Paederinae Fleming, 1821 is recognized by head more or less constricted posteriorly, antennae inserted along the anterior margin of the head, insertions concealed in dorsal view; hind coxa narrow, triangular, its apex strongly projecting posteriorly; pronotum with a large, opaque procoxal process of the pronotal hypomeron (Cameron, 1931; Newton et al., 2000).

Okamoto (1924) reported firstly Paederine in Korea, with *Paederus parallelus* Weise, 1877. After that, 23 genera and 39 species were recognized in Korean fauna so far.

I examined the specimens of Paederinae recently from Natural History Museum of Hannam University and Insect Collection of Chungnam National University recently. As a result, five species [*Astenus chloroticus* Sharp, 1874, *A. setifer* Cameron, 1930, *Medon submaculatus* Sharp, 1889, *Thinocharis japonica* Bernhauer, 1909 and *Scopaeus curraxoides* Adachi, 1955] are identified as new to Korea. The genus *Thinocharis* Kraatz, 1859 is reported firstly in Korean fauna. So total of 44 species are listed up in Korean Paederinae

fauna by addition of five species. The photographs of adult habitus and illustrations of male genitalia of these species are provided here.

Systematic accounts

Subtribe Astenina Hatch, 1957 콤보개미반날개아족(신칭)

Genus Astenus Dejean, 1833 콤보개미반날개속

Astenus chloroticus (Sharp, 1874) 노란콤보개미반날개(신칭)
(Figures 1A, 2A, 2B)

Sunius chloroticus Sharp, 1874: 74.

Astenus chloroticus: Adachi, 1955: 19; Smetana, 2004: 583; Shibata et al., 2013: 151.

Diagnosis. Body length 5.0–5.3 mm, body yellowish brown, antennae and legs yellow and paler than body. Head subquadrate, longer than wide, wider than pronotum, densely and coarsely punctured, posterior area with four long black setae; temple slightly longer than eye; antennae rather long and slender, each antennomere longer than wide. Pronotum slightly narrower than than elytra, longer than wide, narrowed posteriad, punctuation same as head, anterior margin smoothly rounded and bearing several long black setae. Elytra slightly longer than pronotum,

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Peer review under responsibility of National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA).

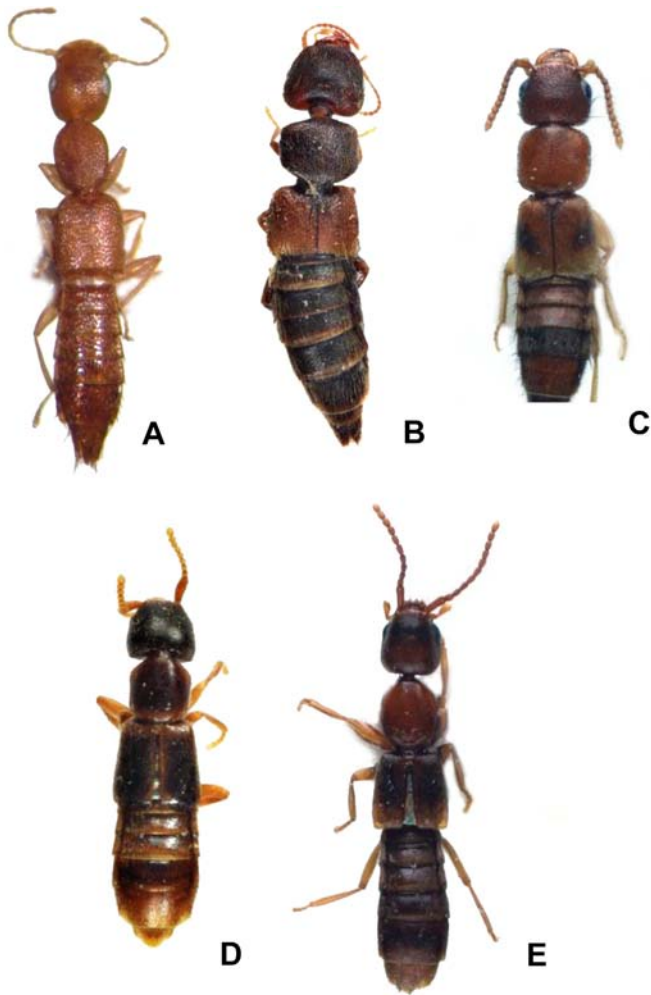


Figure 1. Adult habitus. A: *Astenus chloroticus* (4.6 mm); B: *A. setifer* (4.3 mm); C: *Medon submaculatus* (4.0 mm); D: *Thinocharis japonica* (2.8 mm); E: *Scopaeus curaxoides* (3.5 mm).

rather coarsely punctured, posterior margin with several long black setae. Posterior margin of abdominal sternite 8 of male broadly and smoothly emarginated, compacted with short spines along the margin.

Aedeagus: median lobe elongate, narrowed from apical third to apex but subapical area slightly dilated and apex blunt in ventral view, apex strongly bent dorsally in lateral view.

Material examined. Gyeonggi-do: 1 ex, Daecheongdo Island, Ongjin-gun, Incheon-si, 14. vii. 2007 (Y.B. Cho); 1 ex, Seokmodo Island, Maeum-ri, Ganghwa-gun, 10. viii. 2007 (Y.B. Cho); Gangwon-do: 1 ex, Obong-ri, Goseong-gun, 29. iv. 1997 (T.S. Gwon); Chungbuk: 1 ex, Ohyang-ri, Eumseong-gun, 17. viii. – 6. ix. 2003 (Y.B. Cho); 1 ex, Jangeup-myeon, Goesan-gun, 8. vii. 2006; 1 ex, Minjujisan Mountain, Yeongdong-gun, 7. ix. 1997 (Y.B. Cho); Chungnam: 1 ex, Campus of Chungnam University, Daejeon-si, 19. v. 2002 (J.S. Park); 1 ex, same locality, 20. v. 2002, (J.S. Park and J.H. Choi); e.g., 1 ex, same locality, 27. v. 2002 (J.S. Park and J.H. Choi); 1 ex, Gyerongsan Mountain, Banpo-myeon, Gongju (J.S. Park and J.H. Choi); Jeonnam: 1 ex, Hataedo Island, Sinan-gun, 25. vii. 2005 (Y. B. Cho); Gyeongnam: 1 ex, Yuldo Island, Samhwa-ri, Yongnam-myeon, 27. vi. 2006 (S.M. Yoon); 1 ex, Baekyangsan Mountain, Busanjin-gu, Busan-si, 2. ix. 2002 (M.B. Choi).

Distribution. Korea (new record), China, Japan, Taiwan.

Astenus (Eurysunius) setifer Cameron, 1930 동보개미반날개(신칭) (Figure 1B)

Astenus setifer Cameron, 1930: 206; Imasaka and Ito, 2006: 33.

Astenus (Astenopleuritus) setifer: Smetana, 2004: 581.

Astenus (Eurysunius) setifer: Shibata et al., 2013: 151.

Diagnosis. Body length 3.4–4.0 mm, slightly shining, head and pronotum reddish black, elytra reddish brown, abdomen black, antennae and legs reddish brown. Head wider than long, widened posteriad, as wide as pronotum, base emarginated, with fine and dense punctures bearing a short yellow hair; eye small; temple about two times longer than eye. Pronotum transverse, the lateral sides almost parallel, surface with sculpture consisting of dense small granules, with fine and dense punctures bearing a short yellow hair. Elytra as long as and slightly wider than pronotum, with fine and dense punctures bearing a short yellow hair.

Material examined. Gyeongbuk: 1 ex, near Yusangdaeji pond, Yusang-ri, Buksan-myeon, Yeongcheon, 22. vii. – 5. viii. 2004 (Y.B. Cho), grass land by pit-fall trap.

Distribution. Korea (new record), Japan.

Remarks. This species is totally different with Korean *Astenus* species by body robust shape in while the latter with elongate shape. Only one specimen of this species was examined.

Subtribe Medonina Casey, 1905 넓적가슴반날개아족
Genus Medon Stephens, 1833 등납작개미반날개속

Medon submaculatus Sharp, 1889 검은무늬등납작개미반날개(신칭) (Figures 1C, 2C, 2D)

Medon submaculatus Sharp, 1889: 266; Adachi, 1955: 23; Smetana, 2004: 608; Shibata et al., 2013: 158.

Diagnosis. Body length 3.8–4.5 mm, shining, head reddish brown, pronotum and elytra yellowish brown, antennae and legs yellowish brown. Head quadrate, almost as long as wide, finely and densely punctured, mostly as wide as pronotum, eye moderately large, as long as temple. Pronotum transversely subquadrate, slightly narrowed posteriad, densely and finely punctured, with longitudinal impunctate midline. Elytra densely and finely punctured, with large dark mark at latero-median area, slightly wider than pronotum, apical area paler. Abdomen reddish brown but segments 6 and 8 reddish black, posterior margin of abdominal sternite 8 of male broadly and shallowly emarginated.

Aedeagus: ventral process widened apically, left side of apical area rolled toward inside, ventral process with small process at lateral half in lateral view, dorsal process very thin and sharp in lateral view.

Material examined. Gangwon-do: 4 exs, Myeongpa sand beach, Myeongpa-ri, Hyeongnae-myeon, Goseong-gun, 18. ix. 2012 (K.S. Oh and Y.B. Cho); 1 ex, Gulbasa Temple, Gwangsan-ri, Ganseong-eup, Goseong-gun, 18. vii. 2012 (K.S. Oh and Y.B. Cho), near stream.

Distribution. Korea (new record), Japan, Taiwan.

Genus Thinocharis Kraatz, 1859 붉은더듬이개미반날개속(신칭)

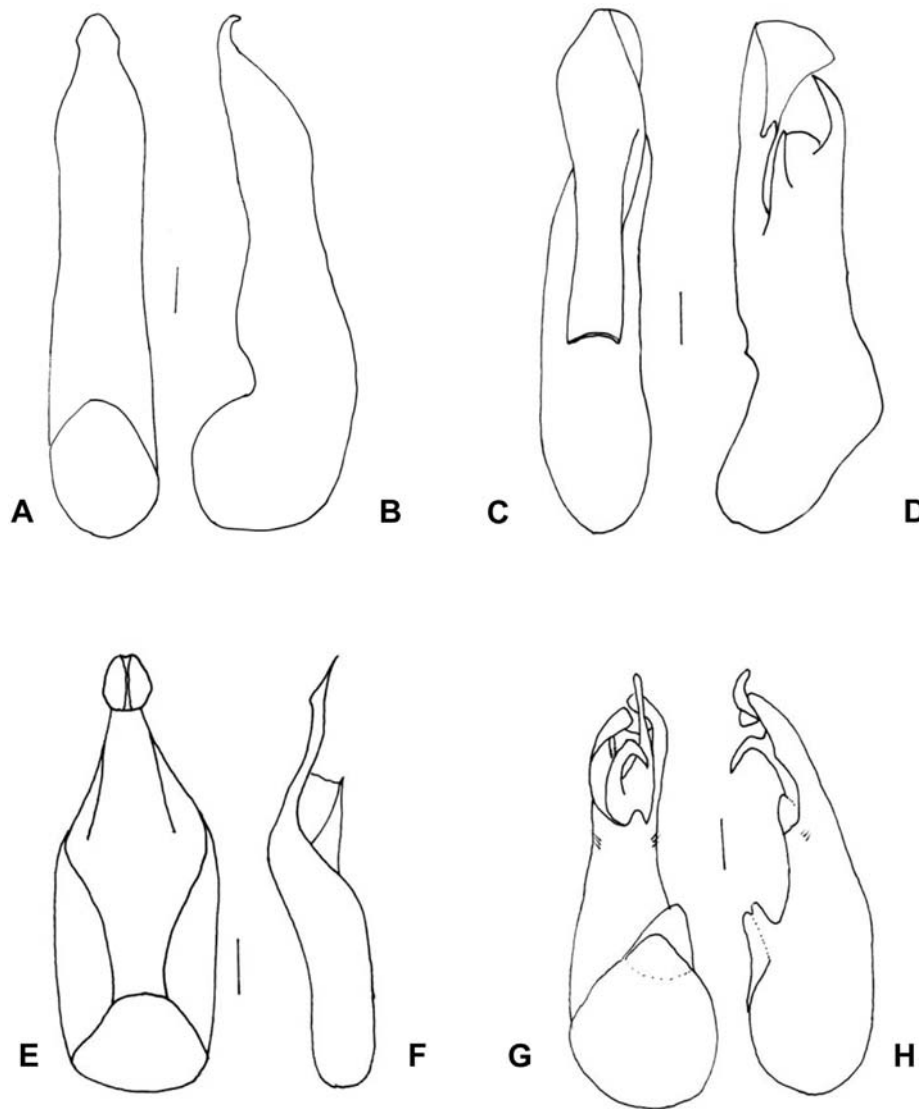


Figure 2. Male genitalia. *Astenus chloroticus*: A. ventral view, B. lateral view; *Medon submaculatus*: C. ventral view, D. lateral view; *Thinocharis japonica*: E. ventral view, F. lateral view; *Scopaeus curraxoides*: G. ventral view, H. lateral view. Scales = 0.07 mm.

Thinocharis japonica Bernhauer, 1909 굵은더듬이개미반날개(신칭)
(Figures 1D, 2E, 2F)

Thinocharis japonica Bernhauer, 1909; 199; Adachi, 1955: 21;
Smetana, 2004: 611; Shibata et al., 2013: 159.

Thinocharis brevicornis Bernhauer, 1907: 381 (Homonym).

Diagnosis. Body length 2.5–2.8 mm, slightly shining, head black, pronotum, elytra and abdomen reddish brown, antennae and legs yellowish brown. Head subquadrate, slightly longer than wide, widened posteriad, finely and densely punctured, wider than pronotum; eye very small; temple over 2.5 times longer than eye; first two antennomeres very thicker than the others. Pronotum transversely subquadrate, narrower than head or elytra, finely and densely punctured, with longitudinal impunctate midline. Elytra finely and densely punctured, basal area paler. Posterior margin of abdominal sternite 8 of male sinuated strongly.

Aedeagus: median lobe narrowed from basal half to apex, apical area round plate-shaped, middle area with longitudinal groove in ventral view, apical area bent dorsally and ventral margin sinuated, apex sharp in lateral view.

Material examined. Gyeonggi-do: 6 exs, Cheonggyesan Mountain, Cheonggye-dong, Uiwang, 20. ix. 2000 (U.S. Hwang and H.J. Kim); Gangwon-do: 4 exs, Osaekyaksu, Seo-myeon, Yangyang-gun, 31. vii. – 15. ix. 2002 (S.J. Park and C.W. Shin and S.J. Park); 1 ex, Baekamsan Mountain, Hongcheon-gun, 25. v. – 20. vi. 2002 (K.J. Ahn and S.J. Park); Chungbuk: 1 ex, Songrisan Mountain, Ssanggok-ri, Goesan-gun, 30. vi. 2006 (H.H. Min); Chungnam: 1 ex, Mansusan Mountain, Oesan-myeon, Buyeo-gun, 19. vii. 1999 (K.J. Ahn); 3 exs, Campus of Chungnam University, Daejeon-si, 18. vi. – 15. vii. 2003 (J.H. Choi, D.H. Lee and S.M. Choi); 2 exs, same locality, 15. vii. – 28. vii. 2003 (J.H. Choi, D.H. Lee and S.M. Choi); 1 ex, Sanan-ri, Geumsan-gun, 10. vi. – 13. vii. 2006 (Y.B. Cho); 2 exs, Munbong-ri, Myeongcheon-myeon, Dangjin-gun, 7. vi. 2006 (S.J. Park and D.H. Lee).

Distribution. Korea (new record), Japan.

Subtribe Scopaeina Mulsant and Rey, 1878 등근가슴개미반날개아족(신칭)

Genus Scopaeus Erichson, 1839 등근가슴개미반날개속

Scopaeus curraxoides Adachi, 1955 작은등근가슴개미반날개(신칭) (Figures 1E, 2G, 2H)

Scopaeus curraxoides Adachi, 1955: 26; Smetana, 2004: 616; Shibata et al., 2013: 159.

Diagnosis. Body length 3.4–3.6 mm, body reddish brown, shining and covered with very fine and dense punctures and pubescence, antennae dark brown, legs yellowish brown. Head quadrate but slightly longer than wide, slightly wider than pronotum, lateral sides parallel, temple two times longer than eye. Pronotum subtrapezoid, slightly shorter than elytra, with impunctate midline, paler than head, posterior-middle area shallowly emarginated with slightly elevated midline. Elytra slightly wider than pronotum, lateral sides rather parallel, apical third margin light brown. Apical margin of abdominal sternite 8 of male sinuate strongly.

Aedeagus: apical lobes slightly widened toward the apex, asymmetric shape; in ventral view, right apical lobe slightly longer than left one, its apex strongly widened like hook, median lobe with two bar-shaped portions of proximal half of dorsal lobe, in lateral view, left portion bent ventrally and its apex sharp, the right portion bent dorsally and its apex blunt.

Material examined. Gyeonggi-do: 1 ex, Chukryeongsan Mountain, Sudong-myeon, Namyangju-si, 12–14. ix. 1999 (U.S. Hwang); Gangwon-do: 8 exs, Jangsin-ri, Ganseong-eup, Goseong-gun, 17. v. 2012 (K.S. Oh and Y.B. Cho); 6 exs, Gulbosa Temple, Gwangsan-ri, Ganseong-eup, Goseong-gun, 18. ix. 2012 (K.S. Oh and Y.B. Cho); 1 ex, Balgyosan Mountain, Cheongil-myeon, Hoengseong-gun, 4–5. vii. 1998 (K.L. You); 1 ex, Punggok-ri, Gagok-myeon, Samcheok-si, 26. vii. 2012 (K.S. Oh and Y.B. Cho); 1 ex, Myeongpa sand beach, Myeongp-ri, Hyeonnae-myeon, Goseong-gun, 18. ix. 2012 (K.S. Oh and Y.B. Cho); Chungbuk: 8 exs, Joryeong Forest Resort, Suanbo-myeon, Chungju-si, 8. vii. 2006 (H.K. Min); 4 exs, Songrisan Mountain, Ssanggok-ri, Goesan-gun, 30. vi. 2006 (H.H. Min); 2 exs, Suryong Waterfall, Suryong-ri, Noeun-myeon, Chungju-si, 25. vii. 2006 (Y.B. Cho); 1 ex, Minjujisan Mountain, Yeongdong-gun, 7. ix. 1997 (Y.B. Cho); 7 exs, Obongsan Mountain, Goesan-eup, Goesan-gun, 7. vii. 2006 (H.K. Min); Chungnam: 1 ex, Nami Natural Recreation Forest, Geoncheon-ri, Nami-myeon, Geumsan-gun, 4. viii. 2004 (Y.B. Cho); 2 exs, Chilgapsan Mountain, Daechi-myeon, Cheongyang-gun, 16. vi. 2007 (Y.B. Cho); 1 ex, Seongdang-ri, Chubu-myeon, Geumsan-gun, 3. vii. 2002 (Y.B. Cho); 6 exs, Dodeokgol, Wolga-ri, Sagok-myeon, Gongju-si, 30. v. 2007 (Y.B. Cho); Jeonbuk: 1 exs, near Wolmyeongsa Temple, Naeyeonsan Mountain, Byeonsan-myeon, Buan-gun, 29. v. 2001 (Y.B. Cho); 3 exs, near Jikso Waterfall, Byeonsan-myeon, Buan-gun, 30. v. 2001 (Y.B. Cho); Jeonnam: 8 exs, Piagol, Jirisan Mountain, Gurye-gun, 31. v. 2002 (S.J. Park and J.S. Park); Gyeongbuk: 1 ex, Mungyeongsaesae Provincial Park, Mungyeong-si, 8. v. 1999 (Y.B. Cho); 1 ex, Juwangsan Mountain, Cheongsong-gun, 28–29. vi. 1987 (Y.B. Cho).

Distribution. Korea (new record), Japan.

Remarks. This species is very similar to *S. currax*, but the latter (3.8–4.2 mm) is clearly larger than the former (3.4–3.6 mm).

Acknowledgments

I would like to thank Prof. K.-J. Ahn who is in Chungnam National University for valuable samples. This study was supported by a grant from the National Institute of Biological Resources (NIBR).

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